

7  
STAT

PART I - SCIENTIFIC RESEARCH WORK OF THE CHEMICAL INSTITUTES AND LABORATORIES OF THE ACADEMY OF SCIENCES USSR FOR 1941-1943

PART II- ABSTRACTS OF SCIENTIFIC RESEARCH WORK FOR 1944, DEPARTMENT OF CHEMICAL SCIENCES, ACADEMY OF SCIENCES USSR

Sources:

PART I - Nauchno-Issledovatel'skiye Raboty Khimicheskikh Institutov i Laboratoriy Akademii Nauk SSSR za 1941-1943 gg, Izd Akad Nauk SSSR, pp 331-360 of 360 pp. [redacted]

STAT

PART II- Referaty Nauchno-Issledovatel'skikh Rabot za 1944 g., Otdeleniye Khim Nauk, Akad Nauk SSSR. Izd Akad Nauk SSSR, pp 227-243 of 243 pp. [redacted]

STAT

STAT

I

SCIENTIFIC RESEARCH WORK OF THE CHEMICAL INSTITUTES AND  
LABORATORIES OF THE ACADEMY OF SCIENCES USSR FOR  
1941 - 1943

<u>TABLE OF CONTENTS</u>	<u>Page</u>
PREFACE	3
CHEMICAL INSTITUTES AND LABORATORIES OF THE DEPARTMENT OF CHEMICAL SCIENCES OF THE ACADEMY OF SCIENCES USSR IN 1941 - 1943	5
I. INSTITUTE OF GENERAL AND INORGANIC CHEMISTRY OF THE ACADEMY OF SCIENCES USSR	10
THEORY AND METHODS OF PHYSICOCHEMICAL ANALYSIS	
THE ABSCENCE OF SINGLE POINT IN THE CURVE OF THE PROPERTIES OF AA RATIONAL SYSTEM, V. Ya. Anosov	12
RELATIONSHIP BETWEEN THE CURVES OF THE SPECIFIC WEIGHTS AND VOLUMES FOR BINARY SYSTEMS, V. YA. Anosov	12
REFRACTOMETRY OF ELECTROLYSIC SOLUTIONS, O. Ya. Samoylov	12
DILATOMETRIC STUDY OF THE REACTION $FeCl_3 + 3NaOH \rightarrow Fe(OH)_3 + 3NaCl$ , A. V. Nikolayev, and A. G. Kurnakova	13
DILATOMETRIC STUDY OF SOME COLLOIDAL CONVERSIONS, A. V. Nikolayev	14
THE NATURE OF BORATE REGROUPING AND THERMOGRAMS OF BORON GLASS, A. V. Nikolayev	14
HEATING CURVES (THERMOGRAPHY) AS A METHOD OF PHYSICOCHEMICAL ANALYSIS, L. G. Berg	15

	<u>Page</u>
THE STRUCTURE OF COMPLEX GLASSES, Y. A. Poray-Koshits	16
THERMOCHEMISTRY	
NEW EXPRESSION OF THE ENERGY OF IONIC CRYSTALS, A. F. Kapustinskiy	16
THE THERMODYNAMICS OF MANGANESE AND THE ENTROPY OF WATER IONS, A. F. Kapustinskiy	17
THE THERMODYNAMICS OF THE MANGANESE ION AND THE HEAT CAPACITY OF IONS IN SOLUTION, A. F. Kapustinskiy	17
THE THERMODYNAMICS OF THE MANGANESE ION; THE APPARENT SIZE OF THE MANGANESE ION IN A WATER SOLUTION, A. F. Kapustinskiy	18
THE ACTIVITY OF STRONG ELECTROLYTES AND THE BINDING OF IONS IN SOLUTION, A. F. Kapustinskiy	18
THE APPARENT SIZE OF THE PERMANGANATE ION IN A WATER SOLUTION, A. F. Kapustinskiy, and N. P. Kapustinskaya	18
STUDY OF THE HEAT CAPACITY OF WATER SOLUTIONS OF POTASSIUM AND CALCIUM PERMANGATES, A. F. Kapustinskiy, and V. R. Klokmah	19
IONIC ENTROPY, HEAT CAPACITY, AND HEAT OF FORMATION OF THE STRONTIUM ION FROM MEASURING THE HEAT OF SOLUTION OF STRONTIANITE IN ACIDS, A. F. Kapustinskiy, and I. P. Dezider'yeva	19
SOLUBILITY AND ITS IMPORTANCE IN GENERAL AND ANALYTICAL CHEMISTRY, A. F. Kapustinskiy	19
THE EFFECT OF THE THIRD COMPONENT ON THE HEAT OF SOLUTION OF SALTS, N. K. Voskresenskaya, K. S. Ponomareva,	20
ISOTHERMS OF INTEGRAL HEATS OF SOLUTION OF SALTS, N. K. Voskresenskaya, G. N. Yankovskaya	20

	<u>Page</u>
CRYSTALLOCHEMISTRY	
DIVISION OF THE ELEMENTS BY SUBGROUPS OF THE PERIODICAL TABLE ON THE BASIS OF CRYSTALLOCHEMICAL GROUNDS, G. B. Bokiy	21
THE NATURE OF CHEMICAL BONDS IN SOME INORGANIC COMPOUNDS, G. B. Bokiy, E. Ye. Vaynshteyn	21
THE CRYSTALLOCHEMISTRY OF THE LAVES PHASE, G. B. Bokiy, and E. Ye. Vaynshteyn	21
THE CRYSTAL STRUCTURE OF NiIn and Ni <sub>2</sub> In, Ye. S. Makarov	22
THE CRYSTALLOCHEMISTRY OF THE PHASE WITH THE NICKEL ARSENIDE TYPE OF STRUCTURE, Ye. S. Makarov	22
NATURE OF METAL ALLOYS	
CHEMISTRY OF METAL ALLOYS, N. V. Ageyev	23
THE RELATIONSHIP BETWEEN THE DALTONIDE AND THE BERTHOLLIDE PHASES IN METAL SYSTEMS, N. V. Ageyev, Ye. S. Makarov	23
THE SHAPE OF THE FIRST BRILLIEN ZONE FOR A HEXAGONAL STRUCTURE OF THE NICKEL ARSENIDE TYPE, Ye. S. Makarov	23
SOLID SOLUTIONS WITH DEFECTIVE LATTICES IN THE NICKEL-ARSENIC SYSTEM, Ye. S. Makarov	23
PHYSICOCHEMICAL STUDY OF PHASES WITH THE NICKEL ARSENIDE STRUCTURE IN IRON-ARSENIC-NICKEL AND IRON-ARSENIC-COBALT systems, N. V. Ageyev, Ye. S. Makarov	24

	<u>Page</u>
CALCULATING THE COMPOSITION OF INTERMETALLIC COMPOUNDS, O. Ye. Zvyagintsev	24
ALLOYS OF METALS OF THE IRON GROUP	
IRON AND NICKEL ALLOYS WHICH HAVE BEEN ENRICHED WITH IRON, A. T. Grigor'yev, D. L. Kudryavtsev	24
ALLOYS OF IRON WITH MANGANESE, A. T. Grigor'yev, D. L. Kudryavtsev	25
STUDY OF ALLOYS OF IRON WITH MANGANESE AND CHROME, A. T. Grigor'yev, D. L. Kudryavtsev	25
OXIDATION OF SOLID SOLUTION OF IRON WITH CHROME AND ALUMINUM, I. I. Kornilov	26
REENTGENOGRAPHIC STUDY OF THE PROCESS OF RECRYSTALLIZATION OF IRON-CHROME-ALUMINUM ALLOY No 2 OF THE INSTITUTE OF GENERAL AND INORGANIC CHEMISTRY, V. G. Kuznetsov, V. Rabezova	26
PRODUCTION OF CARBONLESS FERROCHROME BY A CHEMICOTHERMAL METHOD, I. I. Kornilov	27
SCIENTIFIC BASIS OF THE PRODUCTION OF A CARBONLESS FERROCHROME BY THE METHOD OF THE INSTITUTE OF GENERAL AND INORGANIC CHEMISTRY, I. I. Kornilov, Ye. A. Kremleva, A. I. Shpikel'man, A. A. Azovskaya	27
QUATERNARY SOLID SOLUTION OF IRON, CHROME, NICKEL, AND ALUMINUM, I. I. Kornilov, R. S. Mints	28

	<u>Page</u>
EFFECT OF TITANIUM ON PROPERTIES OF HEAT RESISTANT ALLOYS, I. I. Kornilov, V. S. Mikheyev, G. A. Garnyk	29
EFFECT OF NIOBIUM ON THE NITRIDIBILITY OF STEEL, N. M. Voronov	29
NEW HIGH TEMPERATURE ALLOY No 3, I. I. Kornilov, K. A. Osipov, A. A. Azovskaya	30
METHODS OF TESTING THE RELATIVE HEAT RESISTANCE OF ALLOYS, I. I. Kornilov, A. A. Azovskaya,	30
STUDYING THE NATURE OF IRON NICKEL ALUMINUM ALLOYS OF HIGH COERCIVITY, O. S. Ivanov	30
EFFECT OF CONVERSION TEMPERATURE OF SUPERCOOLED AUSTENITE ON THE COMPOSITION OF SEPARATING CARBIDES, N. N. Sirota	31
KINETICS OF THE ISOTHERMAL COAGULATION OF PARTICLES WHICH DO NOT COLLIDE, N. N. SIROTA	31
ANALYTIC EXPRESSION OF THE KINETIC CURVE OF ISOTHERMAL CONVERSION OF THE SUPERCOOLED PHASE, N. N. Sirota	31
TWO TYPES OF S-SHAPED CURVES OF STABILITY OF SUPERCOOLED AUSTENITES, N. N. Sirota	32
PYROPHORIC PROPERTIES OF ALLOYS OF THE MANGANESE ARSENIC SYSTEM, N. V. Ageyev, and Y. S. Makarov	32

PHYSICOCHEMICAL ANALYSIS OF ALLOYS OF LIGHT AND NON-FERROUS  
METALS

	<u>Page</u>
STRUCTURAL DIAGRAM AND MECHANICAL PROPERTIES OF TERTIARY ALLOYS OF MAGNESIUM WITH ALUMINUM AND SILVER, ENRICHED WITH MAGNESIUM, V. G. Kuznetsov, M. A. Skryabina, L. N. Guseva	32
PHYSICOCHEMICAL STUDY OF THE MAGNESIUM ANGLE OF A MAGNESIUM- ALUMINUM-MANGANESE, N. V. Ageyev, I. I. Kornilov, A. N. Khlapova	33
PHYSICOCHEMICAL STUDY OF ALLOYS OF ALUMINUM WITH ZINC AND LITHIUM, T. A. Badayeva, P. Ya. Sal'dau	33
THE PROPERTIES OF ALLOYS OF ALUMINUM WITH MAGNESIUM AND LITHIUM, T. A. Badayeva, F. I. Shamray	34
AGING OF ALLOYS OF ALUMINUM WITH ZINC AND LITHIUM, T. A. Badayeva, and F. I. Shampay	34
MECHANICAL PROPERTIES OF ALLOYS OF ALUMINUM WITH ZINC AND LITHIUM, T. A. Badayeva, F. I. Shamray	34
CORROSION RESISTANCE OF ALLOYS OF ALUMINUM WITH LITHIUM, P. S. Moiseyev, F. I. Shamray	35
MECHANICAL PROPERTIES OF ALLOYS OF ALUMINUM WITH MAGNESIUM AND ZINC IN RANGE OF SOLIC SOLUTIONS OF ALUMINUM, T. A. Badayeva, F. I. Shamray	35
SOME PROPERTIES OF ALLOYS OF ALUMINUM WITH MAGNESIUM AND CALSIUM, T. A. Badayeva, F. I. Shamray	36
THE AGING OF ALLOYS OF ALUMINUM WITH MAGNESIUM AND CALCIUM IN THE RANGE OF SOLID SOLUTIONS OF ALUMINUM, T. A. Badayeva, F. I. Shamray	36

	<u>Page</u>
THE CHEMICAL NATURE OF BERTHOLLIDES, V. I. Mikheyeva	36
STUDY OF THE STRUCTURAL DIAGRAM OF ALUMINUM-MAGNESIUM-ZINC IN THE PART, ENRICHED BY MAGNESIUM, V. I. Mikheyeva, O. I. Kryukova	37
THE CHEMICAL NATURE OF THE TERTIARY INTERMETALLIC PHASES IN THE SYSTEM Al-Mg-Zn, V. I. Mikheyeva	38
PHYSICOCHEMICAL ANALYSIS OF ALLOYS OF MAGNESIUM WITH ALUMINUM AND CADMIUM, ENRICHED BY MAGNESIUM, V. I. Mikheyeva, V. P. Vasil'yeva, and O. N. Kryukova	38
STUDY OF ALLOYS OF Al-Fe-Si, V. I. Mikheyeva, O. N. Kryukova	39
STUDY OF THE DYNAMICS OF TRANSITION OF IRON IN ALLOYS OF THE SILUMIN TYPE AT VARIOUS TEMPERATURES, V. I. Mikheyeva, and O. N. Kryukova	39
BASIS OF A SYSTEM OF HEAT TREATMENT OF MAGNESIUM ALLOYS BY PRESSURE, S. I. Gubkin, and Ye. M. Savitskiy	40
EFFECT OF THE BASIC FACTORS OF DEFORMATION ON THE PLASTIC PROPERTIES OF MAGNESIUM ALLOYS, Ye. M. Savitskiy	40
EFFECT OF THE ADDITION OF ALUMINUM AND ZINC ON THE MILLING PROPERTIES OF MAGNESIUM ALLOYS AT THE COMPOSITION OF Al-Zn = 7%, S. I. Gubkin, Ye. M. Savitskiy, and L. M. Shafranovich	41
STUDY OF THE ROLLING PROPERTIES OF ALLOYS OF MAGNESIUM WITH ALUMINUM, S. I. Gubkin, Ye. M. Savitskiy, and N. I. Bashilova	41

- STUDY OF THE PLASTIC PROPERTIES OF MAGNESIUM ALLOYS WITH AND INCREASE  
IN THE PERCENT OF ALUMINUM, Ye. M. Savitskiy, and O. I. Kurova 41
- POWERFUL ETCHING OF POLISHED SECTIONS OF MAGNESIUM ALLOYS, Ye. M.  
Savitskiy 42
- THE POSSIBILITY OF THE REPLACEMENT OF PRISMATIC SHAPES BY  
CYLINDRICAL IN TESTING MAGNESIUM ALLOYS FOR RESILIENCE, Ye. M.  
Savitskiy, and O. I. Kurova 42
- USING NEW METHODS FOR MECHANICAL TESTING OF ALLOYS, Ye. M.  
Savitskiy and N. P. Slavina 42
- THE PROBLEM OF THE HARDNESS OF COPPER NICKEL ALLOYS, Ye. M.  
Savitskiy, and N. I. Slavina 43
- EFFECT OF THE ADDITIONS OF VARIOUS METALS ON THE HEAT TREATMENT  
OF SPECIAL ZINC SILUMINS, Y. M. Savitskiy, and O. I. Kurova 43
- SELECTION OF OPTIMAL CONDITIONS FOR HEAT TREATMENT OF METAL  
ALLOYS UNDER PRESSURE, Ye. M. Savitskiy 44
- PHYSICOCHEMICAL ANALYSIS OF ALLOYS OF PRECIOUS METALS  
STUDY OF THE SYSTEM Au-Pd-Ag, V. A. Nemilov, A. A. Rudnitskiy, and  
T. A. Vidusova 44
- ROENTGENOGRAPHIC STUDY OF Bd-Au-Ag ALLOYS, V. G. Kuznetsov 44

STUDY OF THE PLASTIC PROPERTIES OF MAGNESIUM ALLOYS WITH AND INCREASE IN THE PERCENT OF ALUMINUM, Ye. M. Savitskiy, and O. I. Kurova	41
POWERFUL ETCHING OF POLISHED SECTIONS OF MAGNESIUM ALLOYS, Ye. M. Savitskiy	42
THE POSSIBILITY OF THE REPLACEMENT OF PRISMATIC SHAPES BY CYLINDRICAL IN TESTING MAGNESIUM ALLOYS FOR RESILIENCE, Ye. M. Savitskiy, and O. I. Kurova	42
USING NEW METHODS FOR MECHANICAL TESTING OF ALLOYS, Ye. M. Savitskiy and N. P. Slavina	42
THE PROBLEM OF THE HARDNESS OF COPPER NICKEL ALLOYS, Ye. M. Savitskiy, and N. I. Slavina	43
EFFECT OF THE ADDITIONS OF VARIOUS METALS ON THE HEAT TREATMENT OF SPECIAL ZINC SILUMINS, Y. M. Savitskiy, and O. I. Kurova	43
SELECTION OF OPTIMAL CONDITIONS FOR HEAT TREATMENT OF METAL ALLOYS UNDER PRESSURE, Ye. M. Savitskiy	44
PHYSICOCHEMICAL ANALYSIS OF ALLOYS OF PRECIOUS METALS STUDY OF THE SYSTEM Au-Pd-Ag, V. A. Nemilov, A. A. Rudnitskiy, and T. A. Vidusova	44
ROENTGENOGRAPHIC STUDY OF Bd-Au-Ag ALLOYS, V. G. Kuznetsov	44

HARDNESS AND MICROSTRUCTURE OF ALLOYS OF IRON WITH IRIIDIUM, V. A. Nemilov, and T. A. Vidusova	45
ALLOYS OF PLATINUM WITH BERYLLIUM, Va. Nemilov, and A. A. Rudnitskiy	45
ALLOYS OF PLATINUM WITH WOLFRAM, V. A. Nemilov, and A. A. Rudnitskiy	46
ROENTGENOGRAPHIC STUDY OF ALLOYS OF Pt-Cu-Ni, V. G. Kuznetsov, and T. A. Vidusova	46
INCREASING THE MECHANICAL PROPERTIES OF Pd-Ag-Au ALLOYS BY ADDITION OF A FOURTH COMPONENT, V. A. Nemilov, T. A. Vidusova, and V. K. Nikitina	46
SOLID SOLUTIONS IN NATIVE METALS OF THE PLATINUM GROUP, O. Ye. Zvyagintsev	47
METHODS OF WORKING METAL ORES	
PRODUCTION of Nb <sub>2</sub> O <sub>3</sub> FROM PYROCHLORE BY THE CHLORINATION METHOD, G. G. Urazov, and I. S. Morozov	48
PRODUCTION OF TIN FROM LEAN TIN CONCENTRATIONS BY CHLORINE METHOD, G. G. Urazov, I. S. Morozov, and Z. M. Novozhenyuk	48
PRODUCTION OF TIN FROM LEAN TIN CONCENTRATIONS BY THE CHLORINE METHOD, G. G. Urazov, I. S. Morozov, A. A. Zabelin, and V. S. Volodina	49

	<u>Page</u>
ELECTROCHEMICAL SEPARATION OF TIN FROM SOLUTIONS OF ITS COMPOUNDS, M. A. Klochko, Z. S. Medvedeva	49
THE PHYSICOCHEMICAL NATURE OF THE PHASE WHICH OCCUR DURING THE DISSOCIATION OF MANGANESE MINERALS AND ORE, Ye. Ya. Rode, G. G. Purinov	50
ROENTGENOGRAPHIC STUDY OF THE PRODUCTS OF ISOTHERMIC DISSOCIATION OF MANGANESE OXIDE ORE OF THE CHIATURA DEPOSITS, V. G. Kuznetsov, and V. Rabezova	50
THE STRUCTURAL DIAGRAM OF A MANGANESE CARBONATE-CALCIUM CARBONATE SYSTEM AND THE PHYSICOCHEMICAL NATURE OF CHIATURA CARBONATE ORES, Ya. Ya. Rode, and G. G. Tsurinov	51
PSILOMELANES AND WADS, Ye. Ya. Rode, and T. V. Rode	
ROENTGENOGRAPHIC STUDY OF MANGANESE MINERALS AND ORES OF THIS OXIDE TYPE, V. G. Kuznetsov	51
PRODUCTION OF ACTIVE MANGANESE DIOXIDE FROM LEAN MANGANESE ORES AND THE USE OF IT AS A DEPolarizer IN CELLS, Ye. Ya. Rode, A. I. Lazareva, and G. G. Tsurinov	52
PHYSICOCHEMICAL STUDY OF URAL MANGANESE ORES, Ye. Ya. Rode	53
THE PROBLEM OF USING A NEW TYPE OF RAW MATERIAL, URAL MANGANESE ORES, IN THE CELL INDUSTRY, Ye. Ya. Rode	53

	<u>Page</u>
USING THERMAL ANALYSIS FOR STUDYING THE PROCESSES OF REDUCING METAL OXIDES BY CARBON, Ye. Ya. Rode	54
PRODUCTION OF MANGANESE CHLORIDE BY CHLORINATION OF LEAN MANGANESE OXIDE AND CARBONATE ORES, Ye. Ya. Rode, and I. S. Morozov	54
VARIOUS MODIFICATIONS OF MANGANESE DIOXIDE, Ye. Ya. Rode	55
THE PERCENTAGE OF NICKEL AND COBALT IN CHIATURA MANGANESE ORES O. Ye. Zyyagintsev	55
THE REACTIONS IN HETEROGENIC SYSTEMS, CONTAINING COBALT (SOLIDS AND GASES), A. Ya. Zvorykin	55
PRODUCTION OF A QUALITY NICKEL HYDRATE BY REPLACING SODA BY MAGNESITE, S. Z. Makarov, A. Ya. Zvorykin, and F. M. Perel'man	56
INTENSIFICATION OF THE PROCESS OF ROASTING COBALT BEARING ORE, S. Z. Makarov, A. Ya. Zvorykin, and F. M. Perel'man	56
RELATIONSHIP OF THE COMPOSITION OF COBALT HYDROXIDE TO THE CONDITIONS OF ITS FORMATION, S. Z. Makarov, F. M. Perel'man	56
ENRICHMENT OF COBALT CONCENTRATES AND REGENERATION OF COBALT FROM RESIDUES BY FLOTATION IN SALT SOLUTIONS OF SUITABLE METALS, S. Z. Makarov, F. M. Perel'man, and A. Ya. Zvorykin	56

	<u>Page</u>
EQUILIBRIUM IN THE OXIDATION-REDUCTION SYSTEM $Co^{++} + Ni^{++} \rightleftharpoons Ni^{+} + Co^{+}$ Co <sup>++</sup> , S. Z. Makarov, and F. M. Perel'man	56
PHYSICOCHEMICAL ANALYSIS OF WATER AND SALT BALANCES	
WATER REGENERATION OF POTASSIUM NITRATE, A. G. Bergman, M. I. Ravich, A. P. Obukhov, Ye. P. Basova, F. Ye. Borovaya, F. B. Ginzburg, I. S. Rassonskaya, Ya. Ye. Soferovich	57
POLYTHERMS OF TERTIARY SYSTEMS $NaNO_3 - Na_2CrO_4 - H_2O$ and $KNO_3 - K_2CrO_4 - H_2O$ , M. I. Ravich, and Ye. V. Frolova	58
ISOHYDRIC STERIC FOLDS OF ICE IN QUATERNARY SYSTEMS, M. I. Ravich	58
THE TERTIARY SYSTEM $KNO_3 - NaNO_3 - H_2O$ , M. I. Ravich, and F. B. Ginzburg	59
POLYTHERMS OF THE MUTUAL SOLUBILITY OF MANGANESE, CALCIUM, AND SODIUM CHLORIDES, O. K. Yanat'yeva	60
ISOTHERMS OF THE SOLUBILITY OF SALT WATER SYSTEMS, WHICH CONTAIN CESIUM, S. Z. Makarov, and F. M. Perel'man	61
THE SYSTEM $NaCl - Na_2SO_4 - Na_2CO_3 - 48\%$ SOLUTION OF NaOH AND ITS APPLICATION IN REMOVING CAUSTICS FROM TABLE SALT, S. Z. Makarov, and L. S. Itkina	61
THE CONDITIONS OF USING AND PRODUCING SODIUM HYDROXIDE BY THE REACTION OF SODIUM SULFATE AND LIME, A. V. Nikolayev, A. G. Kurnakova, and S. I. Vol'fkovich	62

	<u>Page</u>
PRODUCING CAUSTICS AND SULFUR FROM SODIUM SULFIDE BY THE ACTION OF CARBON AND SUPERHEATED STEAM, V. I. Nikolayev, T. I. Arnol'd	63
SIMPLIFIED METHOD PRODUCING POTASSIUM NITRATE FROM POTASSIUM CHLORIDE AND NITRIC ACID, V. I. Nikolayev, K. F. Pavlov, and T. I. Arnol'd	63
THE RATE OF DECOMPOSITION OF POLYHALITE BY WATER, I. N. Lepeshkov, and N. V. Bodaleva	64
SOME DEPOSITS OF SODIUM SULFATE IN AKTYUBINSK OBLAST AND THE POSSIBILITY OF ITS INDUSTRIAL UTILIZATION, I. N. Lepeshkov, and S. P. Gandel'man	64
SOLUBILITY OF POTASSIUM CHLORIDS AND AMMONIUM IN A SATURATED SOLUTION OF $(\text{NH}_4)_3\text{PO}_4$ FOR VARIOUS CONCENTRATIONS OF AMMONIA AT $25^\circ$ , A. Ya. Zvorykin, and V. Ya. Ketkovich	65
PHYSICOCHEMICAL ANALYSIS OF FUSED SALTS	
SPECIFIC WEIGHT AND VISCOSITY OF A TERTIARY SYSTEM OF SODIUM POTASSIUM AND CALCIUM NITRATES, A. G. Bergman, N. Ye. Smidt, and I. S. Passonskaya	66
THE TERTIARY SYSTEM $\text{NaNO}_3$ - $\text{Na}_2\text{SO}_4$ - $\text{Na}_2\text{CrO}_4$ , I. S. Rassonskaya, and A. G. Bergman	66
FUSIBILITY DIAGRAM OF THE TERTIARY SYSTEM OF SODIUM CHLORIDE- SODIUM FLUORIDE-SODIUM CHROMATE, I. S. Rassonskaya, and A. G. Bergman	66